

U.S. Serial No.: 10/807,227
Reply July 19, 2006

REMARKS

Claims 1-40 are pending in this application for reissue of U.S. Patent No. 6,271,278, which issued on August 7, 2001. Reexamination and reconsideration are respectfully requested.

Applicants wish to express their gratitude to the Examiner for granting a personal interview on May 16, 2006 to discuss the remaining issues in the case.

A Request for Corrected Filing Receipt has been submitted by facsimile to OIPE. The Examiner is requested to confirm that the Request has been received and that the Office's records reflect that the instant application is a continuation-in-part of, and claims the benefit of, USSN 08/416,269, filed April 4, 1995, now U.S. Patent No. 5,750,585. The required amendment to the instant specification was made by Preliminary Amendment dated March 22, 2004.

I. Claims 1-40 were rejected under 35 USC 102(a) as being anticipated by Hahnle et al. (DE 195 40 951, corresponding to US Patent 6,136,873).

The Action does not indicate the effective date of Hahnle et al.; however, applicants presume it is the "Offenlegungstag": May 7, 1997. The filing date of US Patent 6,271,278, for which reissue is sought, is May 13, 1997. However, the claimed subject matter was invented in the United States prior to the effective

date of Hahnle et al. This is evident from the attached Rule 131 Declarations of all co-inventors: Kinam Park, Jun Chen, and Haesun Park. The Declarations refer to the Statement of James H. Meadows, the undersigned attorney, and establish that the invention was conceived and reduced to practice well in advance of the filing date of the instant application, and prior to the presumed effective date of Hahnle et al. Accordingly, Hahnle et al. is not properly cited as a reference under 35 USC 102(a).

II. Claims 1-40 were rejected under 35 USC 102(b) as being anticipated by Van Phan et al. (US Patent 5,506,035).

Van Phan et al. disclose absorbent polymer foams for use in diapers, sanitary napkins, and the like. The Action maintains that Van Phan et al. disclose additives and agents incorporated into the polymer foam that "read on" the recited disintegrant materials of the claimed invention. The Action particularly maintains that the recited cellulosic disintegrant materials are not seen to patentably differ from the cellulosic materials and larger group of viscosity control agents of Van Phan et al.

Van Phan et al. propose optional inclusion of a surfactant, polymerization initiator, or viscosity control agent in their pre-foam reaction mixture. (col. 9, line 5 - col. 10, line 60) Suitable surfactants are nonionic and are preferably selected from linear alkoxylated alcohols, linear alkylphenoxyated

alcohols, and esters thereof. (col. 9, lines 46-48) The polymerization initiators are those typical for inducing polymerization and are unrelated to the instant disintegrants. The viscosity control agents are indicated as being useful for controlling the particle size of the blowing agent dispersed in the reaction mixture, or for facilitating coating/printing of a stable dispersion onto a substrate. Van Phan et al. indicate that exemplary viscosity control agents are carboxymethyl cellulose (CMC), hydroxyethyl cellulose, and polyacrylic acid. (col. 10, lines 55-57) [Notably, Van Phan et al. also mention that their polymer foam can be flexibilized by the inclusion of an "internal" or "external" plasticizer. Such plasticizers can be unsaturated compounds that form addition-type polymers or relatively long chain polyols, and are not suggestive of the instant disintegrants. (col. 21, lines 6-45)]

The recited disintegrants of the claimed invention stand in stark contrast with the aforementioned materials of the cited reference. Firstly, it should be noted that an instant disintegrant reduces the swelling time of a hydrogel composite by maintaining its porous network structure upon drying (see, e.g., col. 24, lines 29-34 of US Patent 6,271,278). It is not seen how any of the optional inclusion compounds of Van Phan et al. can help maintain porosity of their polymer foams.

By keeping the pore structure of an instant hydrogel composite open, the improved capillarity facilitates rapid absorption of water. The disintegrant can thereby permit a rapid breakup of tablets prepared with an instant hydrogel composite. For example, whenever commercially available particles of Ac-Di-Sol®, a crosslinked sodium carboxymethylcellulose that exists in its dry state as stiff fibers (diameter 10-20 μm , length 100-200 μm), serves as a disintegrant in the present invention, swelling times are reduced. (Table 2, Samples 9-12) This is believed due to the retention of capillary channels in the hydrogel composite, on account of the particulate structure of the disintegrant, as well as its intrinsic hydrophilicity. (col. 24, lines 29-55)

Notably, each type (i-v) of recited disintegrant of the claimed invention is distinct from the aforementioned inclusion materials of Van Phan et al., none of which is inorganic in nature. In particular, the referenced surfactants are not crosslinked, nor do they have a particulate shape. Likewise, none of the contemplated viscosity control agents is crosslinked or particulate in nature. While, at first glance, the CMC of Van Phan et al. may appear to be among the recited disintegrants, that material is a linear polymer - it is not crosslinked and does not have a particulate shape, such as Ac-Di-Sol discussed

above. (For a discussion of CMC used as a viscosity control agent, the Examiner is referred to the attached publication found at www.lsbu.ac.uk/water/hycmc.html, which shows the linear polymer structure of this compound. That reference indicates that CMC is used to control viscosity and does not gel, i.e., crosslink, even in the presence of calcium ions.)

Since the viscosity control agents of Van Phan et al. are not structurally akin to the recited disintegrants, they do not help maintain the porosity and reduced swelling time of an instant hydrogel composite. In fact, it is observed that hydrophilic linear polymers, such as CMC, actually retard diffusion of water into the center of a hydrogel composite, due to their absorption and retention of water on the surface of the hydrogel. Consequently, the presence of a linear polymer can actually slow the swelling of an instant hydrogel composite.

In view of the above discussion, it is clear that none of the optional inclusion compounds disclosed by Van Phan et al. fairly contemplate any of the various types (i-v) of recited disintegrants. Hence, the cited reference does not teach or suggest the claimed hydrogel composite.

III. Claims 1-6, 8-16, and 18-40 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12 of US Patent 5,750,585.

Any basis for this rejection is overcome by the Terminal Disclaimer filed herewith, which is signed by the undersigned attorney of record. The Terminal Disclaimer disclaims the terminal part of the statutory term of any patent granted on the instant application which exceeds the expiration date of the full statutory term of US Patent 5,750,585. The requisite fee accompanies.

IV. Claims 1-40 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-28 of US Patent 6,960,617.

Any basis for this rejection is overcome by the Terminal Disclaimer filed herewith, which is signed by the undersigned attorney of record. The Terminal Disclaimer disclaims the terminal part of the statutory term of any patent granted on the instant application which exceeds the expiration date of the full statutory term of US Patent 6,960,617. The requisite fee accompanies.

In view of the foregoing remarks and discussion, it is apparent that the application is in condition for allowance. A Notice of Allowability and reissue is solicited.

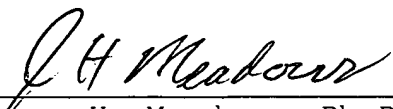
Finally, the Examiner is urged to consider the reference furnished with the accompanying Information Disclosure Statement

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and Form 1449, and to list that reference among the "References Cited" on any patent to issue on this application.

If, in the opinion of the Examiner, a telephone conversation could expedite prosecution, the Examiner is invited to telephone the undersigned attorney at the number given below.

Respectfully submitted,


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CERTIFICATE OF MAILING

I, James H. Meadows, hereby certify that this paper is being deposited with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date July 19, 2006

Signature: 